

Emerging Army Doctrine: Command and Control

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IN MAY 1863, the Confederate Army of Northern Virginia, outnumbered more than two to one by the Union Army of the Potomac, defeated the Union Army in the Battle of Chancellorsville. This victory was a victory of command and control (C2) rather than one of superior numbers. The Confederate commander, General Robert E. Lee, first had to understand the situation, then move to overcome his initial disadvantage, and finally use superior C2 to defeat his opponent. His victory also stemmed from the fact that the defeated Union commander, Major General Joseph Hooker, although he had seized the initiative in the campaign, displayed poor C2. This example illustrates the value of C2 in conducting successful military operations. The U.S. Army's modern operations and doctrine rely on superior C2 for success.

As part of the emerging doctrine to support U.S. Army Field Manual (FM) 3-0, *Operations*, the U.S. Army will publish C2 doctrine in the new FM 6-0, *Command and Control*.¹ The decision to publish a separate C2 doctrinal FM was made because U.S. Army C2 doctrine has been relatively sparse in its higher doctrinal literature. The 1993 version of FM 100-5, *Operations*, discusses C2 under the heading, "Battle Command," and only amounts to a few pages.² More C2 doctrine may be found in FM 101-5, *Staff Organization and Operations*, but this is still only about eight pages out of more than 200.³ Consequently, subordinate branch and echelon manuals have had to develop their own definitions and details of C2, leading to multiple versions of C2 doctrine. A committee effectively decided the Army's C2 doctrine because it lacked a C2 FM to provide details for the concepts in FM 100-5.

Joint Publication (JP) 6-0, *Doctrine for C4 Systems Support to Joint Operations*, does not provide C2 doctrine explicitly.⁴ Other sources of joint C2 doctrine are JP 3-0, *Doctrine for Joint Operations*, and JP 0-2, *Unified Action Armed Forces (UNAAF)*, but there is not a single authoritative source.⁵ Moreover, C2 of land forces has unique

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requirements that joint doctrine does not address.

In contrast, other services and armies have published C2 doctrinal manuals. The U.S. Air Force, U.S. Navy, and the U.S. Marine Corps have all published their C2 doctrine in separate manuals—Air Force Doctrine Document (AFDD) 2-8, *Command and Control Doctrine*; Naval Doctrinal Publication (NDP) 6, *Naval Command and Control*; and Marine Corps Doctrinal Publication 6, *Command and Control*.⁶ The British Army has published its C2 doctrine in Army Doctrinal Publication (ADP) 2, *Command*, as has the Canadian Armed Forces in Canadian Forces Publication (CFP) 300(3), *Command*.⁷

FM 3-0 recognizes information explicitly as an element of combat power and sets guidelines on the meaning. Central to exercising C2, leaders use information to generate understanding and then use that understanding to make decisions that lead to effective actions. FM 6-0 amplifies those concepts in FM 3-0.

Doctrine must guide the development and use of modern information technologies and their powerful ability to influence the conduct of operations. If not, the technology, or those developing the technology, will require the forces to exercise C2 its way. For example, during development of the Army Battle Command System (ABCS), the contractors asked that doctrine be written to label all operation order (OPORD) annexes after F as F1, F2, and F3 because their program did not recognize OPORD annex designations higher than F.

What is in the C2 FM

FM 6-0 provides a common framework for C2 doctrine. This common framework is a common language and defines essential terms to discuss, describe, and develop C2 at schools and centers. It firmly establishes mission command as a C2 concept that best fits the doctrine of full-spectrum operations and uses modern technology to support soldiers. FM 6-0 centers on the commander rather than the staff and focuses on execution rather than planning in the operations process. It further guides schools and centers in their instruction and in their branch and echelon FMs when addressing C2.

FM 6-0 details the concepts from FM 3-0 to make that doctrine useful in application and illuminates how to use information as an element of combat power. It also covers the art of command in some detail and explains that one of the commander's primary roles is to combine the art and science of C2. FM 6-0 uses the visualize-describe-direct-lead methodology of battle command in FM 3-0 as the commander's decisionmaking methodology, whether planning in the formal military decisionmaking process (MDMP) or in execution. Finally, FM 6-0 details C2 during the operations process—planning, preparing, and executing operations with assessing throughout.

FM 6-0 synchronizes U.S. Army C2 doctrine with emerging joint and allied C2 doctrine, allowing Army forces to uniquely contribute to joint or multinational operations or campaigns because C2 doctrine now better fits the doctrine of our partners or potential partners. It covers these and other topics in six chapters and six appendixes. The chapters cover command's nature and art, control's nature and science, the commander's role, the C2 system, and how to exercise C2. The appendixes supplement doctrine in the chapters with discussions on the observe-orient-decide-act cycle, information, staff organization and staff officers, staff responsibilities and duties, liaison, and rehearsals.

The New FM 6-0

FM 6-0's first new concept is mission command. This concept is explicitly new in the Army. We have used mission command a long time without naming it or making it a specific doctrinal concept. Both the Navy and Marine Corps use it, as do the British, the Canadians, the French, the Germans, and others.

FM 3-0 introduces and defines information management (IM) as a contributor to information superiority. FM 6-0 provides doctrine for IM, showing its importance to C2. IM in C2 is one way to use information as an element of combat power. Providing one source of control, FM 6-0 defines IM's subordinate concepts. A later FM, FM 6-0.6, *TTP*

for CP Operations, will provide tactics, techniques, and procedures (TTP) for IM.⁸

Army and joint doctrine have not defined control in C2 before, and FM 6-0 now does so. It also identifies the elements of control and gives principles of control to use in applying the elements during operations and when exercising C2. Finally, it discusses forms of control.

FM 6-0 now provides doctrine on decisionmaking during execution using the MDMP methodology and context, but it is influenced by the conditions of execution. . . . Many interpreted FM 101-5 as requiring the full MDMP for all decisions regardless of time. FM 6-0 guides commanders during preparation and especially during execution in adapting their operation to emerging conditions rather than attempting to retain a plan that may no longer reflect reality.

Another new part of C2 doctrine is identifying the commander and the C2 system—not command and control—as two separate, distinguishable C2 components. FM 6-0 discusses the commander's role, emphasizing that he contributes to the art of command, he combines the art and science of C2, and he is the driving force in C2 for all else. It defines the C2 system, shows that it exists to support the commander in achieving effective C2, and shows how its components work together to achieve this support.

FM 6-0 gives doctrinal guidance on digitization's effects on C2. It discusses digitization and mission command; digitization and IM activities; digitization and exercising C2 during execution; and using digitization to support the art and human sides of C2, thus enabling human potential rather than replacing it. FM 6-0 also provides C2 doctrine during execution. It focuses especially on decisionmaking during execution.

Mission command. Historically, military commanders have employed variations of two basic C2 concepts: mission command and detailed command. Militaries and commanders frequently favored detailed command, but an understanding of the nature of war and the patterns of military history point to the advantages of mission command. FM 6-0 introduces the U.S. Army's preferred C2 concept as mission command. It defines mission command, gives its components, contrasts it with detailed command, and shows the utility of modern information technologies in applying this concept to operations.

Mission command is conducting military operations through decentralized execution based on

mission orders for effective mission accomplishment. Successful mission command results when subordinate leaders at all echelons exercise disciplined initiative within the commander's intent to

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accomplish their missions. It requires an environment of trust and mutual understanding. Its components are the commander's intent, subordinates' initiative, mission orders, and resource allocation.

Mission command provides a commander-centered C2 concept balanced by subordinates' initiative for decentralized operations. This C2 concept requires the commander to describe his visualization through his intent, planning guidance, and commander's critical information requirements so that his subordinates can exercise initiative within his intent. He must also establish an environment of trust and mutual understanding.

IM and information superiority. FM 3-0 introduces information doctrinally as an element of combat power. Through information operations (IO) and IM, FM 3-0 addresses the tasks of directing and coordinating the other elements—maneuver, firepower, and protection. IM contributes to achieving information superiority. This represents a change from the former IO concept, which included the components of IM within IO. While developing FM 6-0, it became evident that information, in general, and IM, in particular, were more appropriately discussed and formulated under C2 doctrine than under IO doctrine.

IM means providing relevant information to the right person at the right time in a usable form for situational understanding and decisionmaking. It uses procedures and information systems to collect, process, store, display, and disseminate data and information. IM supports the three primary functions of control and the C2 system in supporting the commander. By collecting, processing, and displaying relevant information in the form of a common operational picture (COP), IM helps the decisionmaker achieve situational understanding when he applies

his judgment to the COP. With situational understanding and a mission, the decisionmaker can initiate decisionmaking. IM also supports decisionmaking by collecting, processing, displaying, storing, and disseminating relevant information.

Finally, FM 6-0 discusses the role IM plays in disseminating the decision using orders and plans to direct actions that implement the decision. Information that does not lead to action through situational understanding and decisions is not relevant; moreover, it may contribute to information overload of the staff or commander.

Digitization and C2. FM 6-0 provides doctrine that guides digitization to facilitate and strengthen mission command. One perception of digitization is that the Army might minimize the art of command by increasing information and providing commanders better, more accurate, and timely information and intelligence, allowing them to rely less on intuition to visualize current and future states. With more accurate information, they would be better able to dictate the terms, location, and tempo of the battle even at lower echelons. This would appear to create tension with mission command.

Digitization does not change the fundamentals of command, and it can increase the effectiveness of decisionmaking and leading. It should allow commanders to devote more time to the art and human sides of command and permit commanders to achieve and use visualization. Modern information systems, such as ABCS, enable mission command. Above all, these systems allow commanders to provide information to subordinates so they can exercise disciplined initiative within the commander's intent. The COP facilitates subordinates' own situational understanding and conveys their superior commander's perspective so they can visualize intuitively the effects of their decisions on the higher commander's operation and accept or mitigate the costs of their decisions. Subordinates have a context within which to assess information they obtain at their level to use to exercise initiative consistent with their superior commander's intent. As subordinates act on their decisions, information technology allows them to pass information about these decisions to their commander. The commander can monitor the subordinates' actions and, with his staff, resynchronize operations rapidly with information technology after subordinates exploit the tactical initiative.

FM 6-0 explains how digitization can substantially support the art of command by providing commanders better, more accurate, and timely information. With improved situational understanding, the commander focuses on fewer unknowns, thus allowing him to better visualize the current and fu-

Command Based on Trust and Mutual Understanding: *Grant's Orders to Sherman, 1864*

In a letter to General William T. Sherman dated 4 April 1864, General Ulysses S. Grant outlined his plans for the 1864 campaign. Grant described Sherman's specific role as follows:

"It is my design if the enemy keep quiet and allow me to take the initiative in the spring campaign to work all parts of the army together, and somewhat toward a common center. . . . You I propose to move against Johnston's army, to break it up, and to get to the interior of the enemy's country as far as you can, inflicting all the damage you can against their war resources. I do not propose to lay down for you a plan of campaign, but simply lay down the work it is desirable to have done, and leave you free to execute

it in your own way. Submit to me, however, as early as you can, your plan of operations."

Sherman responded to Grant immediately in a letter dated 10 April 1864. He sent Grant, as requested, his specific plan of operations, demonstrating that he understood Grant's intent:

" . . . That we are now all to act on a common plan, converging on a common center, looks like enlightened war. . . . I will not let side issues draw me from your main plans in which I am to knock Jos. Johnston, and to do as much damage to the resources of the enemy as possible. . . . I will ever bear in

mind that Johnston is at all times to be kept so busy that he cannot in any event send any part of his command against you or Banks."



Ulysses S. Grant and William Tecumseh Sherman



ture end state. With the better products from digitization, the commander can identify the unknowns and precisely direct information collection or accept the uncertainty in the interest of time. With more accurate information, he dictates the terms, location, and tempo of the operation. This enables him to spend more time and energy leading and motivating soldiers to perform difficult tasks under difficult conditions. Digitization also keeps the commander connected to his command post, allowing him greater freedom to lead by example and presence without paying the price for losing critical information.

Decisionmaking in execution. FM 6-0 now provides doctrine on decisionmaking during execution using the MDMP methodology and context, but it is influenced by the conditions of execution. As such, it expands on the current doctrine in FM 101-5 that describes the MDMP during planning to produce an order or plan. Many interpreted FM 101-5 as requiring the full MDMP for all decisions regardless of time. FM 6-0 guides commanders during preparation and especially during execution in adapting their operation to emerging conditions rather than attempting to retain a plan that may no longer reflect reality. In other words, fight the enemy, not the plan, a current practice at the combat training centers.

Decisionmaking during execution is often very rapid, even split second, and it may not always fol-

low a formal process. It depends on assessing progress to identify variances in how the commander visualizes the expected progress. If the variances are within acceptable limits, then the operation can continue with branches and sequels and with critical continuing functions of execution discussed in FM 6-0. If variances are too great, the commander must determine if the variances (or their forecast results) present an opportunity for greater success or are a threat to the mission or force. In either case, the commander must adjust his decision.

If the variance presents an opportunity, the decision should take advantage of it by seizing, retaining, and exploiting the initiative. If the variance is a threat, the commander adjusts his decision to bring the operation back in line with expectations. Given the importance of seizing, retaining, and exploiting the initiative in execution-focused operations, FM 6-0 provides doctrine for attaining these goals during stability operations and support operations as well as during offense and defense.

Emphasis on art and humanity. FM 6-0 emphasizes the human and art aspects of C2 as being more important than the material or technological ones. It elaborates on using the visualize-describe-direct-lead methodology of battle command described in FM 3-0. Visualize-describe-direct is the commander's contribution to decisionmaking in the art of command, and lead is how he brings the leadership element of combat power into operations.

As a result, FM 6-0 replaces the terms “battlefield visualization” and “commander’s estimate” in doctrine with the term “commander’s visualization” to capture how the commander combines the art of C2 with the science represented by the MDMP. The term carries the same definition as “battlefield visualization.” It is the key by which the commander combines the art and science of C2, and it is the core mental process that supports his decisionmaking. The commander uses it both in planning and during execution.

The emphasis on the human and art aspects of C2 also includes considering leadership, although not repeating the doctrine covered in FM 22-100, *Leadership*.⁹ However, FM 6-0 does emphasize certain aspects of leadership doctrine that apply particularly to command as well as differences between commanders and other leaders in how they apply leadership doctrine.

Control. Neither joint nor Army doctrine has defined control within C2 officially. FM 6-0 now defines it as “the regulation of forces and battlefield operating systems to accomplish the mission in accordance with the commander’s intent. Control includes collecting, processing, displaying, storing, and disseminating information for creating the common operational picture (COP) and using information, primarily by the staff, during the operations process.”¹⁰

Control consists of three elements. The most important is information. The other two are communication and structure. It provides three basic functions in C2. Control helps decisionmakers achieve situational understanding, it supports decisionmaking, and it disseminates decisions as execution information. Principles of control guide how to employ the elements to accomplish the functions of control.

The C2 system is the component of C2 that provides control functions. The commander also provides some control but only for selected, critical purposes, times, and places in which he must collect or disseminate information personally. Because the

staff is a primary part of the C2 system, staff doctrine has been included in FM 6-0 from FM 101-5.

Historical vignettes. FM 6-0 uses historical vignettes to illustrate or emphasize essential points in doctrine. Not all of these points are contemporary accounts, but C2 is not new. Doctrine must not only be modern in terms of concepts, materiel, and procedures, but it must also meet the test of time. For example, the manual uses General Ulysses S. Grant’s letter to General William T. Sherman for the campaign of 1864 to illustrate the environment of trust and mutual understanding necessary for command in general and mission command in particular.

The encirclement of the Ruhr expands on another historical vignette in FM 101-5, Field Order 18, VII Corps, which initiated a six-division coordinated attack from the Remagen Bridgehead to encircle the Ruhr. The field order consisted of three typewritten pages, an operations overlay, an intelligence annex, and an artillery annex. These vignettes contrast powerfully with the misuse of modern word-processing capabilities to produce OPODs of hundreds of pages.

Digitized, analog, and hybrid units. FM 6-0 provides C2 doctrine that supports digitizing and transforming Army forces. However, for the life of the FM, it also provides doctrine for legacy forces and the hybrid forces that have not yet completed digitization. This also provides doctrine for operations with potential coalition partners who may not have achieved the same level of digitization that U.S. Army forces have.

FM 6-0 provides doctrine on C2 for Army operations and full-spectrum operations. It applies across offense, defense, security, and stability and is fully compatible with its associated operational framework of decisive, shaping, and sustainment operations. FM 6-0 provides a common framework to use in developing branch and echelon manuals and TTP for C2. It also incorporates the latest guidance for transforming Army forces to remain relevant for legacy forces, interim forces, and the Objective Force. **MR**

NOTES

1. U.S. Army Field Manual (FM) 3-0, *Operations* (Washington, DC: U.S. Government Printing Office [GPO], 14 June 2001); FM 6-0, *Command and Control* (Washington, DC: GPO, TBP).
2. FM 100-5, *Operations* (Washington, DC: GPO, 14 June 1993).
3. FM 101-5, *Staff Organization and Operations* (Washington, DC: GPO, 31 May 1997).
4. Joint Publication (JP) 6-0, *Doctrine for C4 Systems Support to Joint Operations* (Washington, DC: GPO, 30 May 1995).
5. JP 3-0, *Doctrine for Joint Operations* (Washington, DC: GPO, 1 February 1995); JP 0-2, *Unified Action Armed Forces (UNAAF)* (Washington, DC: GPO,

24 February 1995).

6. Air Force Doctrine Document 2-8, *Command and Control Doctrine* (Washington, DC: GPO, November 1999); Naval Doctrinal Publication 6, *Command and Control* (Washington, DC: GPO, 19 May 1995); Marine Corps Doctrinal Publication 6, *Command and Control* (Washington, DC: GPO, 4 October 1996).

7. British Army Doctrinal Publication 2, *Command*; Canadian Forces Publication 300(3), *Command* (Kingston, Canada: Directorate of Army Doctrine).

8. FM 6-0.6, *TTP for CP Operations* (Washington, DC: GPO, TBP).

9. FM 22-100, *Army Leadership* (Washington, DC: GPO, August 1999).

10. FM 6-0.

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